Streetscape

and

Landscape

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See website for latest Road Design Appendix B
http://www.virginiadot.org/business/locdes/rdmanual-index.asp

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The following is an excerpt from the ROAD DESIGN MANUAL 2005, VIRGINIA DEPARTMENT OF TRANSPORTATION, LOCATION AND DESIGN DIVISION, VOLUME 1,
APPENDIX B

D. STREETSCAPE

Development trends promote the use of trees, sidewalks, bicycle facilities, and shared paths adjacent to but typically set back from vehicle corridors. Trees may also be proposed within unpaved medians and center islands in cul-de-sac designs.

Landscaping within the right of way is often allowed by land use permit and maintained by the permittee.

Planting strips, located between the curb and sidewalk and parallel with the street, shall be 6 feet or more in width. Care should be used to ensure that larger planting strips to not push pedestrian crossing areas back from the intersections by requiring a larger curb radius. On streets with design speeds of 20 mph or less, or on streets with on-street parking, small street trees may be planted within 3 feet of the back of the curb and should generally by planted along the centerline of the planting strip. To maintain sight lines, trees and other objects should be restricted from corners for distances of 30 feet on all sides. Along all planting strips, the area between 2 and 7 feet above ground should be maintained as a clear zone to preserve sight lines and accommodate pedestrians.

Trees, landscaping, and other encroachments onto the right of way can obscure pedestrians or other vehicles preparing to enter the roadway from adjacent property or side streets. To protect the safety of pedestrians, bicyclist, and motorists alike, it is appropriate for vehicle operators to have an unobstructed view along the full length required by the sight distance triangle. On-street parking is considered a temporary condition and is an exempt factor.

When trees are planted along streets, especially in association with sidewalks, species selection is critical. When attracted to fruits, nuts and berries produced by some species, congregations of birds may cause potentially undesirable conditions for pedestrians Also, species that leach sap tend to damage the finishes on parked cars and, when wet, the leaves of some species may damage automotive finishes.

E. LANDSCAPE CONSIDERATIONS

Listed below are trees that have been successfully used as street trees in Virginia. This list is only general guidance as to the type of tree to be considered for street

plantings, and should not be considered an exclusive list of approved trees for landscaping. Other considerations should be made with any landscape plan.

Due to the constant improvement of varieties as well as the spread of disease and plant pathogens via interstate and intrastate trade, no tree should be utilized without the verification of local factors. Thus, developers or their representatives should have their plan prepared by a local certified landscape architect, and/or confirmed by a certified arborist, nurseryman, or agricultural extension office for advice on site suitability with regard to plant hardiness, soils, soil moisture, available root zone, exposure, known diseases in the area, etc.

A general list does not take into consideration the fact that Virginia spans six temperature zones. Trees listed are not all appropriate for all temperature zones. The temperature range of areas in which a plant performs the best is defined as its "hardiness zone." Thus, while the list below represents a broad array of possible species, it does not indicate any division of use based upon "hardiness zone."

Actual species selection for a given project is often based upon availability. It is strongly suggested, therefore, that developers or their representatives check on availability of species prior to submitting a plan as to prevent last minute changes to the contract and the possible provision of undesirable species.

Considerable care should be exercised in the selection of plantings for placement within the proximity of utilities and should be coordinated with the utility companies potentially affected to ensure the selection of species will be compatible with the needs of the utility companies.

a. Medium to Large Street Trees: These trees are a few examples of perhaps hundreds that have been shown to have good qualities for use as "Street Trees," such as less obstructive leaf litter, mostly due to a smaller and/or thinner leaf structure. Though all trees will have some amount of leaf drop and other "liter", these selections have shown superior form and tolerance of urban conditions that should outweigh concern over other issues. These trees may be placed in planting strips or medians provided they are located outside the clear zone; however, care should be taken to ensure these trees have space for adequate root development.

• Acer rubrum	Red Maple
• Acer saccharum	Sugar Maple
• Betula nigra	River Birch (Single Trunk)
• Fraxinus pennsylvanica	Green Ash
• Fraxinus americana	White Ash
• Ginko biloba	Ginko (Male Only)
• Platanus acerifolia	London Planetree
• Quercus phellos	Willow Oak
• Quercus palustris	Pin Oak

• Tilia cordata	Little leaf linden
• Ulmus parvifolia	Lacebark Elm
• Zelkova serrata	Zelkova

b. Small to Medium Street Trees: These trees are also suitable for street tree planting where overhead utilities may be nearby, thus requiring a smaller crown. These trees may be planted in the planting strip between the roadway and the sidewalk, provided they are outside the clear zone.

• Cercidiphyllum japonicum	Katsuratree
• Pistacia chinensis	Chinese Pistache (Male Only)
• Acer buergerianum	Trident Maple
• Koelreutaria panniculata	Golden Raintree
• Quercus accutissima	Sawtooth Oak

c. Flowering Trees suitable for accent or focal area: While having a low branching pattern, these trees are generally large enough at maturity to reach above the height above a pedestrian, or compact enough to remain within a confined space. Care should be taken when locating very low branched or multi-stem varieties as not to obstruct sight lines, and to keep heavily fruiting varieties away from sidewalks. These trees may be planted in the planting strip between the roadway and the sidewalk.

• Aesculus x carnea	Red Horse Chestnut
• Aesculus parvifolia	Bottlebrush Buckeye
• Amelanchier canadensis	Serviceberry
• Cercis Canadensis	Eastern Redbud
• Cercis chinensis	Chinese Redbud
• Cornus florida	Flowering Dogwood
• Cornus kousa	Korean Dogwood
• Chionanthus virginicus	White Fringetree
• Halesia tetraptera	Carolina Silverbell
• Lagerstromia indica	Crape Myrtle

• Improved fruitless varieties of Pyrus calleryanna, such as "Chanticleer" or "Cleveland Select"

• Prunus yedoensis	Yoshino Cherry
• Prunus serrulata	Kwanzan Cherry

d. Other Large Trees suitable for use in large open spaces: These trees are appropriate for use where setbacks are available for the growth of very large trees; where trees with attractive qualities other than "Street Tree" form is desired; where bark texture and color for seasonal interest is desirable; and/or where leaf litter will not obstruct storm drainage, or drop onto a sidewalk. Such species, while appropriate for the backdrop of a subdivision

entrance, or other open "common space", would not, however, be desirable between a sidewalk and street.

• Betula nigra	River Birch (Multi-Trunk)
• Cedrus deodora	Deodar Cedar
• Celtis occidentalis	Common Hackberry
• Platanus occidentalis	Sycamore
• Liriodendron tulipifera	Tulip Poplar
• Magnolia grandiflora	Southern Magnolia
• Juniperus virginiana	Red Cedar

This list literally represents thousands of new and improved varieties and cultivars of available species in the industry. For this reason, only the common or "generic" species names are given above. Any selection must take into consideration all the factors of a given site, plant availability, and conform to any applicable local ordinance as well as these guidelines. These considerations should be confirmed by a local expert.